
Observationum Medicinalium

FASCICULUS.

by D^r Merrick

(Pr. 1 s.)

Si Towards the end of this little collection, I have taken the liberty to insert a short account of the case we were concerned lately, by way of appendix to a fuller history of the same kind. I thought some of the facts were curious enough to publication, but the work itself is not so much so. As it is I offer it to some.

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REJUDICARY

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Observationum Medicinalium

ASCICULUS.

Δεῖ γε μὴν ταῦτα εἰδότες, μὴ λογισμῷ πρότερον πιθανῷ προσέχουσι ἡγεύειν, ἀλλὰ τριβῇ
μετὰ λόγῳ. ΙΠΠΟΚΡ. Παραγῆ.



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Sir,

Towards the end of this little collection, I
have taken the liberty to insert a short account
of the Copy we were concerned with to-day, viz Day
of Appendix to a fuller history of the same &c. &c.
I thought, some of the ~~best~~ ^{best} were curious enough to
have publication, but the work it self not of consequence
enough to have a separate part to it. As it is, I
offer it to your acceptance, & am,

Sr

Y^r very humble Serv^t

W^m M^r Smith.

Apr. 5. 1765.

Ms. A. 9. 2. 2001

MUJUDISA



P R Æ F A T I O.

MEDICINÆ basis est anatomia. Cui tamen et reliquæ ferè, quotquot sunt, artes, vel ufui inferviunt, vel robur impertiunt, lucemve fimul ac gratiam fubminiſtrant. Quiſquis autem cum humani corporis œconomiâ morborum hiftorias diligenter contulerit, hunc fanè medicum rationalem evaſurum puto, neque ſolùm quoad diagnoſin ac prognofin, verùm et circà indicationes curativas, ritè iudicaturum.

At enim, in hoc ſcribendi genere, quanquàm emicuerint multi, ſuccedentibus facilè palmam prærepturi, utilitati tamen publicæ minùs conſultum iri autumo, ſi, nimio præ metu, ſupprimantur, quæcunque recentioribus occurrant practicis, vel per ſe, vel eventu notabilia.

Siftimus

Sistimus igitur lectori benevolo observata quædam, non omninò vulgaria, ex diuturniori praxi deprompta, partim autem ex recenti memoriâ, partim ex adversariis transcripta, ex Autopsiâ autem omnia.

Quorum equidem in delectu, cum varietati, tum brevitati, imprimis autem veritati studemus.

At verò, tali in lectione, possunt, ni fallimur, juniores præfertim medici tempus (neque longa est mora) haud sine fructu conterere. Iis itaque præcipuè dicamus, hoc, quicquid est, opellæ; si quid, intereâ, principibus viris, pro tenuitate nostrâ, placuisse cognoverimus, id seriò nobis gratulabundi: Forfan, et hujusmodi alia, datâ occasione, prolaturi.

O B S E R V A T I O I.

Thoracis Hydrops, cum Empyemate.

QUINDECIMO ætatis anno, juvenis, habitu sanguineo, pleuritide correptus, decimo morbi die occubuit. Cujus per totum decursum cum exurgerent symptomata minimè vulgaria, placuit parentibus et propinquis, ut verus viscerum status ex disquisitione anatomicâ innotesceret.

Dissecto cadavere, apparuit, in sinistrâ thoracis parte, lymphæ extravasatæ femi-libra. Pulmo superiori parti ejusdem lateris adhærebat. Continuata est hujusmodi adhæsiō, ad mediastinum usque, et ad latus deinceps thoracis dextrum, ubi inventus est abscessus, inter pulmonem et inferiores costas, libram integram continens purulentæ lymphæ. Pulmo ipse in statu sano perstitit, neque aliquid mali passus est, nisi in superficie hujusce lobi, qui inflammatæ pleuræ connectebatur. Pericardium, ad extremos limites distensum, aquæ etiam purulentæ (à prædicto abscessu nihil aut parum differentis) libras duas continebat. Cor ipsum, solito flaccidius ac pallidius, substantiâ, quasi ex maceratione, diminutâ,

B

marasimum

2 *Thoracis & Pericardii Hydrops, cum Empyemate.*

marasmmum mentiebatur illius visceris. Membrana pericardii crassior fiebat, uti in inflammationibus accidere solet, adeò, ut, aquis ad summum usque repleta, motum cordis reciprocum magnoperè impediret. Ad fundum utriusque abscessus subsidebat feri coagulati copia, quali etiam substantia cordis integra involuta est.

Hepar magnitudinem ordinariam superabat, (morbofi tamen nihil exhibebat) et regionem splenicam, anteriori ex parte, occupaverat. Inventa est, in abdomine, lymphæ paucilla extravasata, cætera sana.

Ex præmissis fas erit colligere symptomatum rationem, quæ in hoc casu occurrebant, quæ autem in morbis pleuriticis rarissimè inveniuntur, præsertim in lethalibus. Corde, scilicet, undique compresso, viribusque marasmo diminutis, necesse erat, ut pulsus, pro ratione febris ac doloris, imbecillior fieret, at neque sanguis è brachio missus, à principio morbi, faciem pleuritici sanguinis exhibebat: Quod et à languidiore circuitu potuit pendere. Medium autem quasi statum obtinebat, neque crustâ inflammatoriâ obductus, neque fusior solutiorve solito, ut in febribus malignis, neque omninò serofus, ut in hydropicis.

In venæ-sectione ac remediis antiphlogisticis, magnâ ex parte consistebat regimen; uti et in alvum solventibus. At neque omissa sunt epispastica. Quæ verò circa viscera observata sunt, breviter ut repetam, aderat abscessus thoracis dextri, sinistri hydrops, increassatio, hydrops et abscessus pericardii, adhæsiò pleuræ, per anticam thoracis partem, imminutio et extenuatio cordis substantiæ, inusitatum, contrà, hepatis incrementum.

Morbum

Morbum hunc veram fuisse pleuro-pneumoniam, ad suppurationem vergentem, nullus dubito. Cui tamen suppurationi intervenisse extravasationem lymphæ, non est absimile. Eventus haud infrequens, in morbis thoracicis. Neque incredibile est, in juvene vegeto ac roseo, sub fallaci sanitatis specie, latuisse morbum chronicum, cui, ex concepto frigore, inflammatio superveniens, finem imposuit tragoediæ.

OBSERVATIO II.

Abscessus ex Peripneumoniâ.

PULMONUM abscessus largior et empyema, plerumque in phthisin idque citò, desinunt. Rarissimè autem evadunt, quibus tale quid contigerit. Ejusmodi igitur exempla quædam eo lubentius proferimus.

Vir quadragenarius, labore, sub dio, victum quæritans, ex aere frigidiori veram patitur peripneumoniam. Suppuratur pulmo; rupto dein apostemate, tussis adest purulenta, ac febris, raucedo, et summus, ex colliquatione, marcor. His ità malis ægrè luctantem inveni. Præmissâ venæsectione modicâ, præscribuntur emollientia, balsamica, et nitrosa, ac, paulatim cessante sputo, diætâ lacteâ, præter spem, restituitur. Mansit tamen, per quadriennium, raucedo. Redeunt intereà vires, cum respiratione liberâ. Denique *ευχερος* exit, & *ευσπαρης*, ad opus quotidianum, pro solito, reversus. Elapso deinde spatîo prædicto, tussiendo conatu fortiori ex-

puit substantiam glandulosam, ovo passerino ferè æqualem, sanguineâ guttâ subinctam, et à morbi reliquiis protinùs liber evasit.

Credo, tandem, abhinc biennio, vel ulcere, vel calculo renali extinctum. Annos verò saltem octodecim, à primo morbi insultu, supervixisse.

OBSERVATIO III.

Abscessus, ex Peripneumoniâ.

HUIC simile quiddam memini accidisse mulierculæ trigenariæ, cui, haud dispari ex causâ, pulmo suppuratus, materiam foetidissimam diù evomuit ; attamen, ex idoneo regimine, ac, demum, ex usu lactis asinini, sanatum est vulnus, rediitque pristinus corporis habitus, immò plenior paulò.

Pleuritide autem, post triennium, correptæ, recens supervenit suppuratio, disparuitque ultrò, sine noxâ sensibili. Rediit appetitus, rediere catamenia, vigorque tum animi, cum corporis. Recidivam dein, elapso quadriennio, perpeffa, subitò emarcuit, tandemque septem post annos, incidit in tabem lethalem.

OBSERVATIO IV.

Abscessus Pulmonum.

MIRUM autem, hominem propè sexagenarium, ex vomica largiori, sputo purulento ac hæmoptœe frequenti, per annos ultrà viginti quinque laborâsse; ut centenis pulmonibus instructum crederes. Hunc tamen in vivis esse, ut ut pallidum et macilentum, animoque, saltem, valere, verissimum est.

Huic venæ-sectio frequens pro sacrâ est anchorâ, quæ etiam, in hujusmodi casu, modo in tempore administretur, omnium remediorum est primum. Hâc in principio neglectâ, subsequitur phthisis, ut plurimùm, nullis remediis cefura.

OBSERVATIO V.

Pertussis.

JUVENIS, circâ annum ætatis vigesimum secundum, tussi corripitur ferinâ, cum immâni, juxtâ mediastinum, dolore. Venæ-sectione, lenientibus, antiphlogisticis, vesicatoriis nihil efficitur. Ad gummosa, et volatilia oleosis commista accedimus. Neque his. Repetita venæ-sectio potius obfuit. Oriuntur jam sudores colliquativi, cum vultu sub-lurido. Tandem decoctione corticis peruviani cum balsamo tolutano mitigantur symptomata. Dein, ad gelidum flumen ausi descendere, incolumes, immò, sani evasimus.

OBSERVATIO VI.

Fontanella ad Latus, in Empyemate.

JUVENIS alter, athleticus, viginti ferè annorum, gravi laborat pleuritide, ac pulmonum simul inflammatione. Evacuantium, diluentium ac refrigerantium ope, post sex dies, cessavere symptomata. Deerant tamen signa critica, qualia in morbo rectè judicato superveniunt. Hinc mali latentis suspicio. Intereà paulatim marcescit æger, sensimque solvitur in sudores colliquativos. Succedit horripulatio, cæteraque suppurationis indicia. Diem circiter decimum, ex quo remiserat dolor, ex abscessu pulmonis sinistri, ejicitur puris copia, sanguine permisti, et malè olentis.

Hic rerum status, ad mensem, summâ cum debilitate, facieque tantùm non Hippocraticâ. In re conclamata, ad-movetur causticum lateri affecto ; cujus ope, fit fontanella, inter costas quintam et sextam. Hoc in loco, post duas septimanas, cum spes ferè nulla subesset, per membranam pleuræ, et musculos intercostales, subitus materiæ prorumpenti fit exitus ; cujus effluxu foetidissimo, per menses quatuor, ac pænè continuo, vulnere penitùs deterso, lenitur morbi acrimonia, subsistit tussis, ac, suppresso, cum febre hecticâ, sudore simul colliquativo, sanatur protinus æger, totus jam teres, et rotundus.

OBSERVATIO VII.

Perforatio Thoracis.

CIRCA magna remedia, non semper contingit, audere simul, et sapere. Novimus tamen, qui, et in empyemate simplici, ex inflammatione pleuræ, et in thoracis hydrope, regionem intercostalem feliciter pertuderint.

Forte prætereuntem ad pauperculam accersivit chirurgus, vir sciens et expertus, cui latus, die præcedenti, perforaverat. Vidi profluentem materiam, ex empyemate largo, quâ demùm sensim diminutâ, sana omninò evasit, ex virgine, jam nunc, trium liberorum mater.

Non infrequens erat hæc operatio, apud Parisienses, superiori sæculo. Cujus et encheiresin descriptam habemus, non solum apud authores Gallos, verum etiam à nostratibus, præcipuè modernis, accuratissimè institutam.

Nequaquam verò celebrandam censemus, nisi intrâ cavum thoracis fluctuare materiam, certissimis ex signis dignoscatur.

OBSERVATIO VIII.

Ptyalismus Spontaneus.

ANNUM circâ ætatis octogesium sextum, vetula pusilla at vegeta, peripneumoniam bis intrâ biennium passa, incidit tandem in dyspnæam molestant, quæ tamen, superveniente sputo largiori, citò cessavit.

Exorsus

Exorsus est deinde tumor, ad genam finistram, juxtà os basilare, cum dolore atroci, ac vix tolerabili. Quibus indies adauctis, cum etiam ab oculo interno ad nasum usque et linguam pertingeret dolor, haud injuriâ metuebatur ab incipiente carcinomate; præsertim, id loci, priùs, per annos complures, occupante crustulâ subfuscâ, ut plurimum ficcâ, aliquoties tamen rore pauxillo madente.

Huncce interim affectum attentius observanti visus est morbus, ex serosa potius colluvie ortus. Maxumè, cum, ex concepto frigore, illicò augeri symptomata deprehenderem. Ideò persuasi, ut spissiori velamine caput obduceret, utque leni gargarismate, pro re natâ, uteretur. Quo factum, ut, pleno perpetuoque rivo defluente salivâ, ad annum nonagesimum secundum, sine ullâ graviore noxâ pervenerit; quo tempore, veteris ædificii ad instar, quasi sponte, collapsa est.

Verum est, morbos serosos liberiori secretionem subinde solvi, qualis in honestâ fæminâ, non ità pridem contigit, crudeli rheumatismo laboranti; quæ, cæteris incassum tentatis, ptyalismo tandem spontaneo, (nescio, ane adhuc durante) liberata est.

OBSERVATIO IX.

In Hæmorrhagiâ quâcunque, respice Febrem.

QUADRAGINTA plus minus annos nata mulier innupta, habitu teneriori, hæmorrhagiam uteri continuam,

tinuam, tertio jam mense, passa erat. Cum frustrâ essent, quæcunque styptica audiunt, remedia, tum à nobis, tum ab aliis propofita, pervicaciam morbi sedulò perpendenti occurrit febriculæ quiddam delitentis, variæ tamen, et mutabilis, nulloque justo ordine vel accedentis, vel recedentis.

Huic igitur invigilandum censuimus, exhibitisque sale absynthii ac nitro, cum limonum succo, intrâ horas viginti profligatâ febre, cum signis criticis, cessavit symptoma.

Notandum est, in hoc casu, venæ-sectionem sæpiùs iteratam nihil valuisse, ad minuendam febrem, uti et neque corticem peruvianum, cæteris stypticis adjunctum, quicquam profecisse.

In hæmorrhagiis periculofissimis, irritis aliis, quæ ex saturno præparantur remedia rarissimè spem nostram fefellisse, memini. Hujusmodi praxin scio improbare medicos aliquot insignes. Laudatur ab his, culpatur ab illis. Næ, plumbeum extremarum partium colorem qui remediis saturninis attribuunt, theoriæ plus satis indulgent, obliti forsan, in languidiori sanguinis circuitu, quâlibet ex causâ, (qui tamen sistendæ hæmorrhagiæ omninò necessarius videtur) hoc idem ferè semper accidere. Nempe in accessu febris quartanæ, in affectu hysterico, et aliis. Veritas igitur (non nostro tantùm, sed) ex multiplici experimento elucescit. Sin adsit spasmus, omninò abstinendum censeo. Cæterùm, debitâ cum cautelâ exhibitis, haud unquam malè cessisse vidimus. Quid autem gravius hæmorrhagiâ immedicabili? Attamen, respice febrem; quæ nisi tollatur, metus est, ne in nobile aliquod viscus vis morbi derivetur. Hinc frequens hepatis schirrhus (ubi non hæmorrhagia ex schirrho) vel abcessus, ac hæmoptœ in pulmonis vomicam mutata.

OBSERVATIO X.

Scroti Renovatio.

IN observationibus Henrici Bassii, p. 194, videre est historiam scroti renascentis. Hujusmodi casum vidimus, olim, in nosocomio, ubi miles, ex morbo syphilitico, scroti necrosin consequutus, ejusque integram ablationem, ac deinde ptyalismum passus, suborto novo, ità feliciter convaluit, ut, intrà paucas hebdomadas, vas amplum juscule repletum, in usum ægrotantium, circumferendo sufficeret. Strenuus sanè vir, ac fortis, dignusque, qui, aliis in castris, non sine gloriâ, militaret.

Similem historiam narrat Bartholinus, inter observationes anatomicas, unamque ac alteram Glandorpius, in speculo chirurgiæ.

OBSERVATIO XI.

Calculus per Alvum.

HONESTA fœmina, propè sexagenaria, biliosi habitûs, dolori colico sæpiùs subjecta, hujus insultum acerbiozem per triduum passa erat, vomitumque simul continuum. Exhibitis medicamentis oleosis, et purgantibus, tandem dejecit per sedem lapillum, olivæ mediocris æmulum,

lum, ac dolore protinùs levata est. Ad eluendam tamen ventriculi saburram, propinatum est (quod in promptu adstetit) emeticum, ac plus semel repetita catharsis. Quæ res feliciter cessit. Ægrâ statim ad integram sanitatem restitutâ, neque postea ejusmodi malis vexatâ.

Dissectus per medium lapis substantiam exhibuit rutilantem, resinosæ non absimilem. Quanquam hujusmodi remediis priùs usam fuisse, minimè compertum est.

Cortex ejus exterior haud ità induruerat, quin summis unguibus facilè abraderetur.

OBSERVATIO XII.

Paralysis cum Tertianâ.

VIGINTI ferè abhinc annis, ineunte autumnò, mulier plusquam septuagenaria veram patitur hemiplegiam, accedente etiam linguæ paralyfi. Post venæsectionem accersitus, inveni vultu livido, pulsu debili ac intercepto, ad extrema porrò frigentem, interdum et aliena, licet haud distinctè, loquentem. Applicatur illicò vesicatorium capiti, brachio etiam crurique lateris affecti, ac præscribuntur remedia præcipuè volatilia et cephalica, cum plus justo solveretur alvus, interjecto, pro re natâ, rhabarbari pauxillo.

Rigori prædicto successit calor intensus, ac horas circiter septem vel octo perstitit. Hæc inter, multùm delirabat,

ad solutionem usque paroxyfmi, qui tandem in sudorem benignum defiit. Mane proximo, linguâ pulsuque plusculum valebat. Debilitas autem lateris fiderati adhuc durabat. Exhibita est, cum cephalicis fortioribus, mistura salis absynthii, succo limonum saturati. Die morbi tertio, rediit rigor, quo decedente, rursus incaluit, inque sudores, iterum, sub finem, soluta est. Facies hæc erat veræ intermittentis, cortici peruviano mox locum daturæ. Cùm verò, tum mitiori intensiōis gradu, tum durationis spatio, à priori longè distingueretur hic paroxyfmus, visum est, alteram potius periodum expectare, quò certiori methodo morbus oppugnaretur. Neque enim diffitear, juniorem tum in praxi medicinali, paulisper, circà hujusce remedii usum, hæsisse, in casu, præsertim, insolito, et, quasi, novo.

Tempore igitur expectato rediit febris, abiitque, ut prius, in sudorem proficuum. Hanc utique occasionem nacti, corticem prædictum, sine morâ, præbuimus, radici serpentariæ cæterisque ex nervoso genere remediis conjunctum. Quâ methodo, subactâ febre, rediit illicò pristinus rerum status, ut ad provectiorem adhuc ætatem probè se haberet, non, nisi complures post annos, demùm emortua.

OBSERVATIO XIII.

Ex tertianâ, lochia suppressa.

PUERPERÆ delicatulæ, primis à partu diebus, ex admissio frigore, subsistunt lochia. Suboritur statim rigor,

gor, (cum cephalæâ, ac summâ anxietate) aliquot post horas recedens, successit mox febris intensior, ad horas etiam octo vel novem protracta. Postero die, à febre prorsus vacabat. Manè autem sequenti, majore cum sævitiâ rediit paroxysmus; quo tempore primum ægrotantem invisi, reperique difficile spirantem, pulsu pænè extincto, ac facie, quasi jam tum morituræ.

Præscriptus est haustus, ex sale absynthii, cum limonum succo, superaddito croco, castoreo, ac hujusmodi aliis, suavisque, ut, ad finem usque paroxysmi, tertiâ quâque horâ adhiberetur. Quo, demùm, in sudorem soluto, visum est, non aliâ methodo profligatum iri morbum, quàm quæ ex corticis peruviani usu peteretur. Hoc igitur (adjunctis etiam chalybeatis, et, quæ uterina audiunt, remediis) Dosi satis largâ frequentique, adhibito, neque postea invasit febris, ac, intrâ nycthemeri spatium, favente Lucinâ, cessavit lochiorum suppressio.

OBSERVATIO XIV.

Recti in Vesicam perforatio.

PHARMACOPOLA septuagenarius, vir probitate spectabilis, atroci morbo, per decennium, laboraverat. Conquestus præcipuè, de dolore interno, juxtâ perinæum, ac collum vesicæ, qui ad rectum prorsus intestinum pertingeret. In ambiguo sanè statu hærebat; cum enim micturitio frequens urgeret, sæpissimè fæces tantùm alvinas deposuit; contrâ,

contrà, cum desidendi necessitate premeretur, urina subindè simplex excernebatur. Nunc viis destinatis utramque partem exoneravit, non rarò autem urina retrorsum descendit. Ità diù miseram protraxit animam, donec alicundè exorsa febris, finem attulit æumnis.

Post mortem, inspiciendi cadaveris data est copia, cujus aperti hæc erat conditio.

Pulmonum lobus posterior utrinque ex inflammatione nigrescebat; pleuræ quodammodò, à latere sinistro, affixus.

Intestina universim discolorata. Duodeni aderat inflammatio, ad sphacelum tendens. Vasa mesenterica, supràm modum, distensa.

Coli pars cæco proxima, distensa simul, et inflammata.

Rectum, per integram longitudinem, durum, lividum, et schirrhosum.

Splen etiam, ex schirro livescens, vix dimidium magnitudinis legitimæ explebat.

Renis sinistri substantia tota in suppurationem abiit. Superstite solùm membranâ investiente, in plurimas itidem cavernas distinctâ, veteris morbi reliquias.

Ren dextrum mensuram naturalem triplo superabat, et materiâ purulentâ scatebat.

Ureteris

Ureteris sinistri magnitudo mirabilis, trium saltem digitorum capax. Dextri ad initium, formata (proculdubio) recens obstructio, tam urinæ quàm puris descensum in vesicam, magnâ ex parte impedivit.

Vesicæ tunicæ, ex inflammatione crassiores evasere.

Membrana interna, ulceribus depasta, innumeras etiam exhibuit cavernas.

Sectâ vesicâ, exiit urinæ purulentæ copia. Hinc foramen amplum in intestinum rectum desiit.

In inguine dextro, hernia vetus omentalis. Cætera omnia naturæ consentanea.

OBSERVATIO XV.

VIR octogenarius, urinæ retentione, per septimanam integram premebatur. Urgebat interea dolor intensus, circa perinæum; ac virga, ut in vesicæ calculo, intra abdomen retrahebatur. Signum ejus, si qua scriptoribus fides, præcipuum, ac pathognomonicum. Immisso cathetere, neque urinæ quicquam, aut calculi inventum. Orta dein suspicio de obstructione renum. Unde autem symptomata descripta *?

Ve-

* Quid ni ex carcinomate interno?

Venæ-sectione, clysteribus, opiatis, emollientibus, semicupio, remediis denique variis necquicquam laboravimus. Tandem, longum post tempus, cum alvus liberè satis solveretur, nihil tamen profuit. Quid multa? Inter purgandum, urina, sub finem, copiosè descendens, postico fefellit adstantes. Viis autem ordinariis, ne gutta quidem exclusa est. Alteram, demùm, post septimanam, interiit æger.

Utrumque uno eodemque morbo occubuisse, ^{reor.} ~~opere~~

OBSERVATIO XVI.

DOLOREM quendam obscurum fenserat vir quadragenarius, circà renem dextrum. Post menses quatuordecim, juxtà vesicæ collum, acerbius dolebat, cum frequenti micturitione, ac urinâ, subinde, purulentâ.

Remediis mille incassum tentatis, tandem medicum accersit. Summa tum macies, ex febre hecticâ. Dein, renem alterum invadente morbo, totalis urinæ suppressio, mors *.

Ex dissectione, post mortem, in conspectum venit membrana renis dextri, parenchymate orbata. Ex sinistri substantiâ porosâ, veluti ex spongiâ, effluxit ubique pus sincerum. Vesica etiam, urinâ ac pure repleta, non uno itidem in loco exesa; ut inter tunicam internam et musculosam, plurimis quasi cryptis continerentur.

Hancce

* Duplici ex causâ deducenda videtur hæc obstructio. Occluso scilicet urethræ principio, ex pure, ad vesicæ collum sistente, et impeditâ simul, ex recenti renis alterius suppuratione, ulteriori urinæ secretionem.

Hancce historiam non aliam ob causam obtulimus, quàm ut consulat lector Cl. Cheseldeni anatomiam *, ubi, ni fallimur obscuritate loci, hujusmodi statum vesicæ negat se vidisse. Qui rem aliter explicuerit, næ, gratum dubitanti præstabit opus.

OBSERVATIO XVII.

Abscessus Ventriculi, et Vesicæ.

MORBOS cutaneos per universam corporis superficiem huc illuc obrepere, partesque maximè remotas afficeré, nemo nescit. Anne superficies etiam interna simile quiddam patiatur, ut viscera longè distantia diathesi eâdem morbosâ laborent, videant curiosi pathologiæ indagatores.

Nobis utique, bis intrâ unius anni circulum, occurrit abscessus ventriculi, simul ac vesicæ urinariæ. Exesâ protinus tunica illius villosâ, hujus membranâ, reliquiis solùm in mucilaginem redactis.

In utroque viscere, (corporis scilicet dissecti, nam alterius non data est copia) ad fundum subsidebat pus sincerum, supernatante lymphâ, ex fusco nigricante. Renes omninò sani.

Aderat,

* Edit. Anni 1740, p. 261.

Aderat, in altero subjecto, vomitus continuus, in altero, non nisi per intervalla redibat. Urina, in utroque, purulenta, at parùm fætens. Rarus huic ad matulam egressus, nullo interim doloris affectu : Illi frequentius mingendi desiderium, gravi non sine molestiâ.

Ex anatomico examine, hinc, patuit pathologia, ex alterâ parte, à symptomatis solis, liquidò tamen, ut visum est, deducta. Vomitu scilicet, et urinâ purulentis.

Si quis autem ex renum potiùs abscessu materiam hanc productam censeat, eadem forsan est Ætiologia, neque pathos absimile.

F I N I S.

2

SERIOUS REFLECTIONS

ON THE

Manifold Dangers

Attending the USE of

COPPER VESSELS.

[Price One Shilling.]

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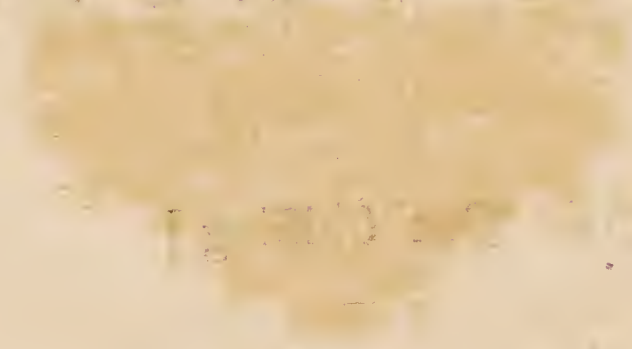
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SERIOUS REFLECTIONS

ON THE

Manifold Dangers

Attending the USE of

COPPER VESSELS,

AND

Other UTENSILS of COPPER and BRASS, in the Preparations of all such Solids and Liquids as are designed for FOOD to HUMAN BODIES :

In a LETTER to a FRIEND.



L O N D O N,

Printed : and Sold by M. COOPER, in Pater-noster Row.

MDCC LV.

SEVERAL REFLECTIONS

ON THE

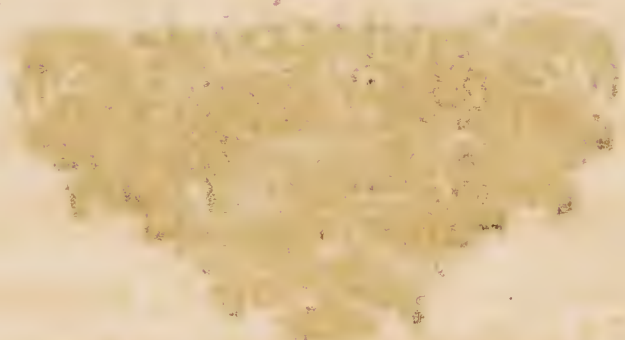
AMERICAN

COPPER VESSELS

AND

THEir USES IN THE
NAVY OF THE UNITED STATES

BY



FOR

SALE BY

SERIOUS REFLECTIONS

ON THE

Manifold Dangers

Attending the U.S.E. of

COPPER VESSELS.

SIR,

THE principal Motives which are apt to excite a Man to exhibit himself to the World in print may be reduced to three: Lucre, Reputation, the public Good. The first of these Motives, where necessity presses hard upon a Man, and no other moral Duty suffers by it, is at least excusable. The second is somewhat more: It is even commendable. For tho', like the former, it springs from the Consideration of Self, while it steers wide of Prejudice to others,

others, there is Honour in it's aim, and it may be productive of general Benefit in it's consequences. But as for the Last, namely, the public Good, it is superlatively great and truly noble ; and has every Claim to universal Esteem. Doubtless it may, and I believe often does, happen, that all these Motives unite in the excitement of one and the same Person. Be that as it may, certain it is, that he, who never puts Pen to Paper but with an Eye to the good of Mankind, deserves all men's Esteem ; even where all his attempts prove to be but weak ; and tho' he should appear to have some other of the above Motives annex'd to it.

After this short Preamble, permit me, Sir, by the present Address to you, to usher into the World my serious Enquiries into a subject which I think of real Importance to Mankind ; *viz.* The dangerous Use of Copper Utensils in general in the Preparation of our Food. Tho' it is to you I offer my Thoughts ; it is to the Public I design the Benefit of them, if any should thence accrue. And if in reality any Advantages should arise to Mankind from this hasty Attempt, I will be so ingenuous as to own, that they are chiefly to be set down to your Credit, to whom I owe the first Hints on this Subject.

Copper is certainly a beautiful ductile Metal, of excellent Service on many Occasions. However, as throughout the whole Oeconomy of the Universe nothing can be right, but what is rightly apply'd, so it appears to me, that, however valuable this Metal may be, and really is, when properly apply'd ; it is frequently used to very improper Purposes ; nay
always

always is so, when form'd into Vessels to be adapted to the End of preparing our Food.

By the Laws of Nature the whole animal Creation is supported by Food ; without this first great Restorer, all living Existences upon Earth must sink into their original Nothing. Man however, and Man alone, is blest with the Power of reasoning, of discerning, of judging : It is he who penetrates into the Secrets of Nature ; it is he who distinguishes what is to be pursued, and what avoided ; and he, in a word, is the only rational Decider, what Food is salutary and what destructive. But altho' it be true, that of all sublunary Beings, Man alone is possess'd of this Power, yet it is equally true that every Man is not possess'd of the reasoning Faculties in the same Degree. Nature is not alike bountiful to all ; and if she was, without mentioning the Indolence of some, and the Capriciousness of others, the Occupations of Life are so very many, that Knowledge must necessarily be limited in every one, and consequently any one Individual of the human Species can only attain to a Part of it.

Hence it appears, that tho' any one Man may know many things ; yet he cannot know all things : And while we honour and esteem a Man of extensive Learning, as a valuable Member of Society, yet are we sensible, there are many things he must be an utter stranger to, on account of the narrow Bounds of human Talents on one hand, and of the many unavoidable avocations of human Life on the other.

If thus much be granted to be solid Truth; it may without Rashness be said, that the Subject before me has not been consider'd by all, or considered so maturely as it deserves.

Food, as I have observ'd above, is indispensably necessary for the support of Life: Now it is not sufficient that to our best Judgment we chuse the wholesome, and use it temperately; we must go farther, and take care, that our manner of preparing it be such, as may not either shorten our Lives, or endanger our Health.

I need not tell you, Sir, that Copper Utensils are now employed in almost every Kitchen in the Kingdom; Copper Pots, Copper Stew-pans, Copper Sauce-pans and Copper Tea-kettles are all in daily use among us; to which we must add, Kettles, Ladles, and divers other things used in Cookery, made of Brass, which is the same Metal incorporated with a fossil Substance, well known by the Name of *Lapis Calaminaris*, or *Calamine Stone*. These Utensils, from the very nature of the Metal, throw out a poisonous Matter, more or less, which mixing with our Food, renders it in a greater or lesser degree pernicious. It must be observ'd, that the pernicious Effects of Copper are sometimes evident, at other times latent: In the first Case it stands self-condemn'd by undeniable Facts; in the other, tho' we cannot so certainly demonstrate it's destructive Properties, yet is the Presumption against it so very strong, as, in our Judgment, to deserve, not only our own Enquiries, but those of the wisest Body in the Kingdom.

As I have observ'd, and you, Sir, are sensible, deep Science, learned Disquisitions, and very nice Experiments are not the Province of every one : Certainly then he who aims at being generally useful should adapt himself to the Multitude : that is, his Ideas should be clear, his Expressions familiar, and then he will be understood by all. You will therefore, I don't doubt, not only pardon me, but even be pleas'd, that, in considering this Subject, I avoid as much as possible all abstruse Arguments, all ambiguous, or technical Terms, in order that I may be the more generally intelligible to my Readers. Thus then, without recurring to an Analysis of Copper, or searching the Mines to trace it's Origin, I cannot but think that, in the Forms in which we daily see and use it, it is capable of affecting our Health, by tainting perhaps every part of the Food, where the Utensils made of that Metal have been made use of in dressing it.

The Matter, which Copper throws out, is Verdigrease, a rank caustic Salt ; in plain Terms, a Poison.

Copper has been much esteem'd from it's being so very malleable ; that, is, that by it's yielding so readily to the Hammer, it can with ease be work'd into this or that Form. Now this very Property, notwithstanding it has hitherto been an argument in it's Favour, is in Reality an Argument against it ; for the more malleable a Metal is, the softer are it's Pores ; and the softer the Pores are, the more readily does it throw out any Matter contained in it, whether noxious or otherwise. But to proceed—

Let us suppose, for argument sake, First, that we have a Copper Utensil perfectly new, just sent from the Brasier's; for instance, a Preserving-pan not tinn'd; if it stands quite unused but a short time, the very Air, especially a moist one, will affect it; there is a foulness on the Pan acquired we know not how; which if rubb'd off with a warm Hand, has an extremely disagreeable Smell; if we apply it to the Tongue it has a nauseous Taste, in proportion to the Time the Pan has been exposed to the Air. Now, if the Air alone has power to extract a degree of poisonous Matter from Copper, what may we not fear from the many Ways these Utensils are employed?

Secondly, If a little cold Water be put into this Pan, tho' perfectly clean, and left to stand a few days, the Pan is visibly corroded, as appears by the Verdigrease all round the Spot where the Water settled. Water therefore, it is evident, will extract this poisonous Matter from Copper.

Now tho' Air and cold Water affect this Metal, yet is there much more to be apprehended than from these simple Powers; for surely Copper, when heated must have much more force to throw out pernicious Particles, than when cold. Therefore,

Thirdly, If Water be long boil'd in such a Pan, it will be so tainted as to become more or less disagreeable both in Smell and Taste: tho' even this will be in a different degree, according to the quality of the Water so boil'd.

Fourthly,

Fourthly, If Milk be boiled in this Pan, it will acquire so nauseous a Taste as scarce to be borne.

Fifthly, If Vinegar be boil'd in it, it will also contract a nauseous Taste, tho' that Nauseousness be partly moderated by the power of the Acid; but that it is impregnated with a portion of Verdigrease is evident, not only from the Taste of the Vinegar, but from it's having left every Part of the Pan, which the Vinegar touch'd, brighter and cleaner, if possible, than when it came out of the Brasier's Shop.

Sixthly, If Salt be put into the same Pan, whether heated or not, and left to stand some Time, it is tinged in different Places of a greenish hue; which is Verdigrease exudated from the Pan, tainting those parts of the Salt which were nearest to it.

Seventhly, If it be used for the melting of Butter, the Butter will contract a still more nauseous Taste than that which Milk is apt to do.

Eighthly, Let it be made use of for melting of Suet, or any other fat Substance, and this be left to stand in it, it will have not only a nauseous Taste, but also contract a greenish hue from the Verdigrease, which the Copper throws out.

Ninthly, Sugar also is capable of extracting the Verdigrease from Copper, it being a kind of saline Substance, and is by some called a saccharine Salt, not only from it's shooting into crystals like Salt, but from it's active Property and Power of preserv-

ing some Substances as Salt does others. But with this too the nauseous Taste is in part conceal'd, as well as with the Vinegar, by the Power of the Acid inherent in both.

From these few Remarks on the Effect that Copper has on the simple Parts of our Food, what may we not fear when a multiplicity of Ingredients are combined? May we not reasonably infer, that those, who feed on the choicest Viands, have their Health so much the more exposed? As every Rank of People in the Kingdom make use of Copper Utensils, more or less, in dressing their Food, so every Rank must be more or less liable to suffer from the Taint it receives from them; but those who, not contented with plain and simple Diet, feed on the most labour'd Dishes, must surely hazard their Health in a much more considerable degree; as the poisonous Particles must necessarily be thrown out in greater quantities, tho' disguised, perhaps, in the Taste, by the high Flavour of a Ragout.

It will, perhaps, be charg'd upon me that I have not set out fairly, as the Utensil I have mention'd is supposed to be untinn'd, contrary to the general Custom in the Use of Copper. When Copper, from it's lightness and beauty, was first introduced into our Kitchens, our Forefathers were sensible it abounded with a Matter very unfit to mingle with what is to be convey'd into the Stomach: and therefore, wisely endeavour'd to defend themselves from the Mischief, as well as they could, by coating, with melted Tin, the whole inside of the Vessels they made use of; thereby to intercept and repel the pernicious Effluvia of that unwholesome Metal, with a kind
of

of Lining as it were of a less dangerous one. This method we still pursue in part, but not wholly ; for Vessels for several purposes, and particularly those used for preserving Fruits are generally untinn'd, as may be seen in every Brazier's Shop in the Kingdom.

Thus tho' I chose an untinn'd Utensil for argument sake, I am far from maintaining that we do not use many that are tinn'd. But does this secure us from Danger ? By no means. Does Copper by it's Nature abound with Verdigrease ? Is this Verdigrease capable of being exudated from it by Water, Salt, Vinegar, and other Materials daily used in Cookery ? And is this Matter, this Verdigrease, when mix'd with our Meat and Drink, and receiv'd into the Stomach, capable of affecting our Health ? If these Questions are answer'd in the Affirmative, not all the Methods that have hitherto been used to defend us from their Poison can justify our continuing the Use of these Utensils : My Reasons are these.

First, Besides these smaller Vessels for the Purposes of preserving and some other particular Uses, those larger ones *antonomastically* or by excellence, on account of their Size, call'd in general *Coppers*, those I mean which are commonly fix'd in Brick-work, for Washing, Brewing, and other like Purposes, are always untinn'd. Now it is well known, that in thousands of Families the same Copper which serves for Washing, is also made use of to boil a Ham, a large piece of Beef, or any other great joint of Meat : perhaps too when it is canker'd with Soap, and consequently render'd still more dangerous,

Secondly,

Secondly, Because Tinning, tho' in some degree a Fence, yet is it too weak a one to be depended on. Every body must be sensible how much Care is requisite in this Point; for unless we can confide, which in general it is impossible to do, that our Sauce-pans, Stew-pans, &c. will always be kept well tinn'd, we cannot use them with any degree of Safety. A very short time destroys the Tinning, either wholly or in part; it may be scraped off, burnt off, melted off, or scower'd off; so that our Safety herein, in great measure, depends on the Virtue, Care, and Labour of those, who preside in the Kitchen, or the Scullery.

The Eye of a watchful Mistress, a notable Daughter, or a staid Housekeeper, is, no doubt, a good Check upon uncleanly or careless Servants; but very many Families are unhappy enough to be destitute of such a Blessing; and certainly no guard against this Mischief is sufficient without the nicest Circumspection. Who is there with any degree of Observation, or knowledge of Life, but has seen some Instances of the effects of Copper on their Food? A Soup excellently good to-day, if left by any Negligence in a Copper Vessel, cannot be eat to-morrow. A Bason of Broth is brought to a sick Person, who perhaps is made more so by it's tasting of Copper or Brass. A Cup of Butter is frequently sent up to Table so nauseous, that it infects every thing it is pour'd upon: and on enquiring into the Cause, the Cook informs her Mistress that the Sauce-pan wants Tinning. So likewise Pickles are serv'd up very inviting to the Eye, but often insupportably rank to the Taste; how so? why the good Housewife boil'd a Shilling's-worth or two of half-pence, or
a pound

a pound Brass Weight in the Vinegar to make her Pickles of a fine Green. These, and many more Circumstances of a similar Nature, come within general Observation. But here I beg leave to add, by way of illustration, an Instance or two highly worthy our Notice.

A Gentleman of distinguish'd Character in this Metropolis had some Cyder which was prick'd; and concern'd at the Loss of a Liquor he was fond of, he spoke of it to a Friend. His Friend inform'd him of a Secret to cure it, by boiling the whole with some innocent Ingredients; which was accordingly done in the Family Copper, and the Cyder in fact was cured of the complain'd of Tartness. The Gentleman highly pleas'd with the Recovery of his favourite Liquor, drank of it with moderate Freedom, as did also several of his Family: in a short time they were all taken ill, and in so unusual a way that the Physician was induced to suspect Poison in the Case: as in fact there was, tho' innocently. After strict Enquiry into every thing which had been eat and drank, at length the Cyder was mention'd with the Operation it had undergone: upon this, the Lead which surrounded the upper Part of the Copper being struck off, it appear'd that a considerable Quantity of Verdigrease lodg'd between that and the Copper had been imbibed by the Cyder when boiling up to it. The Consequence of which was, that several of the Family continued for some time very ill; but the Gentleman himself has never perfectly recover'd his Health since.

A Tradesman and his Wife, not long since, unfortunately dined very plentifully on a Fry; a Dish which, it seems, they were very fond of: and the Maid, who probably had an equal liking to it, made her Dinner also of the same Dish; tho' all of them at the very time of eating were sensible of a disagreeable Taste in the Sauce. Dinner had not long been over before they were all taken ill in a violent Manner; the Wife died in about four and twenty Hours; the Husband and the Maid were both in a miserable Way for some time, but at length recover'd, either from their having eaten more sparingly than the Wife, or from the greater Strength of their Constitution. This shocking Accident, as appear'd evidently afterwards, was occasion'd by the Foulness of the Pan; for upon Examination it was found loaded with Verdigrease, by a Quantity of Fat and Salt having lain in it for some time.

The obvious Inferences to be drawn from these Relations are, First, That Verdigrease will poison. Secondly, That our Food is almost every way liable to be tainted with this poisonous Matter, either by the Power which Salt, Vinegar, and other things naturally have of extracting it from Copper; or by it's being lick'd up wherever any Utensil is already corroded with it by Air, Water, &c. But there yet remains some farther Considerations.

It may be remember'd I took notice that the poisonous Effects of Copper on the human Body were sometimes evident, at other times latent; but even in the first Case it admits of being distinguish'd. For Example: It was evident
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in the Case of the Family who eat the Fry : The Effects were immediate and sensible ; and Death, and the Danger of Death, apparently ensued. Now altho' many Instances might be produced of the evident ill Effects of Verdigrease, yet how many more would have been equally evident had they been attended to ? It is not therefore less true that Verdigrease has caused many Deaths, because it was not seen or reflected on : Accident at one time discovers these things, while at other times Inadvertence and other Circumstances make us overlook them.

The evident Effects of Verdigrease must differ not only in proportion to the Quantity, which is swallowed, but also the greater or less strength of Constitution of those, who are affected by it. The first sensible effect of Verdigrease is in the Stomach ; and no wonder, for the Nerves thereof being very soon affected by it, causes most acute pain ; the Bowels are brought into consent with the Stomach ; next follows violent Vomitings ; and all are succeeded by a train of dreadful Circumstances which but too often terminate in Death.

Thus much for the evident Effects of Verdigrease, and thus much for my Distinction ; but to be still more explicit : Suppose two Persons are poisoned at the same time, and with the same thing ; one is informed what he has taken, the other is not, and both the Parties die : Is not the Death of both demonstrably owing to the same Cause, tho' one of them dies uninformed of the Fact ? Nay, even tho' every Friend about him is likewise ignorant of it ?

I wish sincerely that our Objections to the Use of Copper Vessels, with regard to Food, might end here. Because Precautions could be taken, and Rules laid down to prevent, in great measure, the Poison imbib'd by us. First, we might awaken in the Public an Attention to the peculiar and loathsome rankness of Taste, with which every thing is tainted, that has once imbibed and acquired a Relish of Copper, or Brass, sufficient in general (as Experience demonstrates) to disgust and caution most People of any Delicacy from swallowing either Solids or Liquids, which are ever so lightly tainted with either : And, Secondly, we might point out those Parts of Food which are the most easily acted upon by them, such as Salt, Vinegar, Fat, and the like. These and other Hints might, I say, be given, which, as far as they reach'd, or were regarded, would doubtless be of use : yet this, in our Judgment, is far from being sufficient ; this reaches only the grosser, the more obvious Effects of the Poison, where our Senses, if we use them, may be informed, consequently, where our Attention may guard us from sudden Mischiefs.

But the grand Fear we entertain is, the latent, the skulking Mischiefs of this poisonous Matter. It is a known Truth, that the Stroke which is foreseen may be partly eluded. In the Occurrences of human Life that Enemy is esteemed least dangerous, who attacks us openly ; while he who lurks in Ambuscade, or stabs in the Dark, cannot be guarded against. Thus with relation to the Subject before me, there is, I think, great Reason to apprehend that certain Mischiefs must follow from the general Use of these dangerous Vessels, we
have

have been speaking of; and that the Effect, tho' slow, is nevertheless sure.

Should it be urged, that this is mere Conjecture: I answer, so likewise, in a great degree, is the Science of Medicine: But as no wise Man rejects, or despises, the healing Art, because it is partly conjectural; so no one, we apprehend, can rationally determine against our Objections, while not only Possibility, but even great Probability supports them.

It has been sufficiently observed, therefore need not be repeated, that Copper, by the Softness of it's Nature, throws out the Matter it abounds with more easily, than most other Metals; and unhappily, the Matter, it appears most to abound with, is Verdigrease. This Verdigrease, we say, will poison; and this Poison, we farther say, is by a thousand different ways mixed with our Food. When the Quantity of Verdigrease in our Aliment is so considerable as to render it nauseous, we, having our Senses to guide us, can reject it; otherwise the Effect, as has already been remarked, will be sensible and immediate: But how, while these dangerous Vessels continue to be employed, shall we be guarded from the less sensible Effects? Poison will still be Poison; and tho' the Quantity may be less, the Quality is the same. Nor can we indeed wholly rely on the Sense of Tasting for our Safety; for Sugar, Cyder, Vinegar, and many other things, so disguise the Mischief by blunting the Taste of the Verdigrease, as to prevent our guarding against even a highly poisonous Quantity of it, so long as Copper Utensils are familiarly and indiscriminately made use of.

In the Study of the human Frame, we learn, that the Aliment taken into our Stomach is, by the digestive Powers, fitted for various Purposes, and prepared to be variously disposed of: But principally that Fluid called the Chyle is prepared from the finer Parts of it, and converted into Blood, for the daily Support of our Health, Strength, and Vigour. By the finer Parts of our Aliment is not to be understood the best, but the most minute: Did the Chyle refuse the Admission of whatever is unwholesome, our Blood would be in a purer State, and our Health more solid than it usually is. Whereas, on the contrary, the Chyle admits the impure as well as the purest Particles; and they passing into the Mass of Blood dispose the Body to various Distempers, all more or less violent, in proportion to the Power of Nature to resist them.

Things being thus, who can take upon them to say that Particles of Verdigrease are not continually mixing with our Blood and Juices? And who can say, that this or that Distemper, which suddenly attacks us without our being able to account for the Cause, or which gradually weakens our vital Faculties, is not the poisonous Effect of that pernicious Matter at length breaking forth?

Nothing in human Life is more difficult than tracing the Origin, the primary Cause of Diseases. How many die of Distempers, which Physicians are at a loss to account for? And how many of the wisest and ablest Men are obliged to content themselves with stopping the Effects of a Disease, without ever knowing the Cause?

It is generally acknowledged, that many Diseases are now much more frequent in this Kingdom than heretofore ; particularly Palsies, Apoplexies, Madness, and all the frightful train of nervous Disorders : Now to keep up a chain of Reasoning, in support of my Argument, it may be observed, that the general Use of Copper Vessels in *England* is very modern ; some to this very time prepare their Food in Iron Pots ; and many People are yet living who remember all the Food in their Fathers' Days being dressed in Iron or Earthen Utensils : So much of Novelty there really is in the Use of Copper. May we not then justly fear, that the Verdigrease thrown out from those Vessels made of Copper, is the latent Cause of most of these Evils ?

True it is, that many Diseases are ascribed, and, no doubt, justly ascribed, to our Excesses in our manner of Living ; but altho' this be granted, and be in part matter of Fact, it cannot be of equal weight in the whole : for First, daily Experience shews us that many, very many, of both Sexes, who commit no Excesses, are nevertheless subject to the fatal Diseases we have mentioned. Secondly, that the natural Quality of most Articles of our Food is not only innocent, but even beneficial, and conducive to Health and Vigour. There is indeed one strong Argument against Excess, besides the Error committed by it, which is, as has already been observed, that the more our Food is tortured by Cookery, and the more we eat of Dainties, so much the more may we be justly presumed to have swallowed of Verdigrease.

Hitherto

Hitherto the Reader's Ideas have been confined to the Kitchen, and to the Office of the Cook ; but these are not sufficient ; the Subject is far more extensive, in as much as almost every thing we eat and drink has more or less Connection with some Utensil or other made out of the same dangerous Metal. But not to be too prolix, nor dwell on every Instrument of Danger, let me touch on three Particulars only, too notorious to pass unobserved, *viz.* the Confectionary, the Distillery, and the Brewery.

It has been already hinted, that tho' the tinning of Copper Vessels be in some degree a Fence, yet is it by far too little to be wholly depended on : But the Confectioner, if I am not greatly mistaken, uses in every branch of his Business, no other Copper Implements than such as are untinned. All the Matter therefore which heated Copper can throw out, and all which so active a Substance as Sugar can force out, is blended with our preserved Fruits and Sweetmeats of every kind. Of these Sweetmeats Children of almost every Rank and Age, even Infants, eat in Abundance ; but People of Quality most of all, as they scarce ever dine without a Desert. Experience shews us, that those who eat freely of these Things seldom have good Health. Now if we reason upon it, shall we not ask are Cherries and other such like Fruits wholesome ? Yes. Is not the Sugar wherewith they are preserved wholesome ? Yes. How comes it then that things in their own nature good, should thus visibly do us harm ? Why, no doubt, but when eat to Excess, the very Excess does us harm ; for by loading the Stomach they clog it ; and when thus clogg'd, the Appetite is palled in course. Yet
 2 this,

this, we apprehend, is far from being the sole Cause why Confectionary impairs the Health; it is the Quality that offends perhaps more than the Quantity. It is probably neither the Fruit nor the Sugar which does the Mischief, but the Particles of Verdigrease blended with both, whether this be perceptible to the Eye or the Palate, or elude the one and the other.

The Practice of Dram-drinking has had many able Pens to set forth both it's odious Deformity, and it's destructive Effects. Those Labours we cannot but honour, as they tend to the Reformation of public Morals, and to the Preservation of the Lives of the Populace. But the Writers on that Subject have omitted one Circumstance, which, it is to be feared, greatly adds to the dangerous Use of these poisonous Potions, *viz.* that of their being drawn thro' Copper, and this too always untinn'd. Besides the Canns, the Funnels, and the Cocks apt to corrode with Verdigrease, the Spirits, one and all, are drawn over from Copper Stills; consequently all which Fire and Spirit can extract from that Metal is impregnated with the Drams, which the lower Class particularly, so familiarly, and so unhappily pour down their Throats. We do not here mean to say, that ardent Spirits are in their own Nature innocent and inoffensive, far from it; no Man, who has the least Tincture of physical Knowledge, or the least Degree of Experience, can advance so palpable an Absurdity: But we have the strongest Presumption on our Side, to assert, that the destructive Quality of every spirituous Liquor is greatly heightened by the Particles of Verdigrease it abounds with: Even so far as to make it doubtful whether there are
not

not more Lives lost by this additional unnoticed Poison than by the Spirit itself.

Public Brewery is but of very modern Date; and tho' Domestic Brewing is not so; yet the general Use of Copper, instead of Iron, in the Brew-houses, as well of those who privately brew at home only for their Family Use, as of the Brewers for the Public, is a Practice of as great Novelty, as it is of pernicious Consequence to the Health of the Subjects of this Nation. We cannot but apprehend, that this so general a Use of Copper for Brewing, even in the most cleanly Manner, must be attended with certain Danger: Yet how much more may we not justly fear, when almost every Family in *London* is served with their Malt Liquor from a public Brew-house, where, should the Copper fail of due Inspection, they must consequently be very liable to be corroded with Verdigrease. The times of Brewing are with some much more frequent than with others; yet many have their principal Business at Spring and Autumn; therefore between these Seasons the Coppers are, no doubt, subject to be loaded with the poisonous Matter we have been speaking of. But not designedly to injure any one, suppose the Boilers are perfectly clean; who can answer that the Pumps be not loaded with Verdigrease? No body can get at the Inside of these: Now as they are made of Copper, and all the Malt Liquor we drink passes thro' them, there is room to apprehend great Mischief from them. Besides, even allowing, what indeed is hard to grant, that every thing about our Brewery is perfectly free from noxious Foulness, this Reflection

fection still subsists, that the heated Copper will impregnate any Liquid, which passes through it, with poisonous Particles; and consequently lay the Foundation of future ill Effects on human Health.

From these Remarks, two things, we apprehend, pretty plainly appear. The one, that the Verdigrease which manifestly exudates from Copper in the Preparation of our Food actually does hurt us; the other, that, however latent it be, it probably may hurt us; the first stands self-condemned; the last has strong presumption against it; and both deserve the strictest Enquiry. Which therefore I wish, I had weight enough to recommend, not only to the private study of every Man of Learning and Genius in the Nation, especially of those whose Talents may be superior to my own, but also and much more to the Vigilance of our wise Legislators, those destin'd Guardians of our Properties, Persons and common Welfare.

And certainly should what has been here advanced be allow'd to have any weight, it ought not to stop here: The great End proposed by this Attempt is the public Good; and the Test of this Attempt must be by farther Search. The Hopes of being serviceable to Mankind has induced me to draw my Pen against the too familiar Use of Copper, as of a dangerous Metal; but it would give me infinitely more Pleasure to have undeniable Proofs that it is a perfectly innocent one for the purposes of Food, than any Encomiums could raise in me for having pointed out the Danger. For tho' to warn others of the Dangers we apprehend is an Office, which may and ought to yield us both Credit and Sa-

tisfaction ; yet the being made sensible that we have no Danger to fear is still preferable.

The Subject before me is every way serious ; serious in it's Nature, and serious in it's Consequences : And he, who sits down to write on such a Subject with honest Views, will not designedly omit, conceal or disguise whatever is material : will not, in a word, disregard any one Individual of Society. For my own Part, I have nothing on this occasion either to hope or fear for my self ; no Bias to rule me, no Interest of my own to pursue : yet, without Vanity I say it, I feel a generous Tenderneſs for others. Should therefore my bare suggested Fears prove well grounded ; should any farther Enquiries into this Subject occasion a diſuſe of Copper Veſſels in the preparation of Food to take place ; there are three things which may particularly deſerve our farther conſideration, *viz.* What other Matter we ſhall beſt ſubſtitute in the lieu of Copper ? What is to become of the Copper Mines ? And, How are the Artificers in the Copper to be employed ?

The firſt of theſe Questions is eaſily answered, tho' not ſo eaſy to be comply'd with. The Veſſels and other Utenſils for a Kitchen may be formed out of Iron, Silver or Earth. There are caſt Iron Pots ſtill to be ſeen in ſome Kitchens in the Kingdom, at leaſt in ſome Cottages ; but theſe are doubtleſs very cumbersome from their Weight : And that perhaps may have been the grand Cauſe of their being grown ſo much out of uſe. Whereas Plate Iron is light, pleaſant, ſweet and wholeſome ; may be brought to any form or any ſize ; admits of a fine poliſh ; and in a word, may perfectly well ſupply the general Uſe of Copper.

Silver

Silver Utensils are not to be expected in every Kitchen ; especially the larger Vessels. Yet many Families might use them very commodiously, at least some of the small ones, if not the others : And perhaps with as much safety from Robbers as they do their Silver Spoons.

Earthen Utensils are in general very sweet and wholesome, yet not wholly unexceptionable. A very ingenious Gentleman has lately wrote a sensible, tho' short Account, of the mischievous glazing of some of our Earthen Ware ; and produces an Instance where Lemon Juice having destroyed the glazing of a common red Pan, there appeared at the bottom a large Quantity of a poisonous Matter, well known by the Name of Sugar of Lead. He therefore justly recommends for the Purposes of Food, Stone Ware and China : Though, at the same time, it must be owned, that the common Earthen Ware (however dangerous with Acids) may yet be used, for many Purposes, with great Safety.

But suppose for the general Furniture of our Kitchens, we take Plate Iron in lieu of Copper ; the Change must unavoidably be attended with considerable Expence ; which though by some it will be very sensibly felt, yet to others it will prove light and trivial : But let those who, from such a Change, find some Inconveniency, still console themselves with the Reflection, that they are providing for the Safety of their own Health, and that of Posterity in general. And they who, from a less justifiable Cause, are disposed to murmur and find fault with so salutary an Alteration in domestic Oeconomy, are desired to recollect, how often and fondly they give into expensive Novelty where their Safety is no

ways concerned, and only in Compliance with useles, & not even dangerous, Modes, as ridiculous in themselves, as they are costly to the Persons, who embrace them.

Doubtless the Property of every Man is, and must be, a Matter of real Consequence to himself: Those therefore, who have Estates in Copper Mines, cannot but be displeased with any change, which may affect it's Consumption. There is indeed a Rule in Trade, I believe pretty generally adhered to, which is, that, where the Consumption of any Commodity is small, the Price is large: Now supposing the Demand for Copper to be diminished, the Price being raised to the Consumer would, perhaps, compensate for the Difference to the Proprietors.

Besides, it is to be consider'd, that many Copper and Brass Articles in a House could not be in the least affected; those only which are immediately made use of in preparing what we eat and drink, being the sole Objects of this Enquiry. Now it is very certain, that besides the Difference of the Price of Copper, already hinted at, there are other Ways of consuming it, which may in part, if not wholly, make up the Deficiency. *Sweden* has already taught us the way to do this, by making Frames for Pictures and Glasses, inlaying of Tables, Chairs, and making other Ornaments in Copper and Brass: And *France*, it is said, is following the Example of *Sweden*. Should then so populous a Nation as *England* improve on both, the Consumption of our Copper would thereby undoubtedly become very great. But even if all should fail, I cannot depart from the Principle of preferring the public Good to any private Emolument.

My

My last Consideration is, How are the Artificers the Copper Workers to be employed? This, next to the preserving our Lives and Health, is, in my Judgment, the most weighty Concern of all. How valuable is the labouring Part of every Nation! How do they toil to earn perhaps a bare Support for themselves and Families! How cruel therefore to cut them off from a part of the very means of obtaining that Support, since, narrow as it is, it is their All! This I reflect on with great Concern. Yet I am not without hopes that, should a Change, with respect to the Matter in hand, really take place, some thing may be here proposed to prevent any individual Member of the Community wanting that Bread he is industriously disposed to earn. First, There are many Hands in the Kingdom not so confined, but that they can with ease leave one Employment to take up another; and that oftentimes a more gainful one. Secondly, There are others of naturally so mechanical a turn that they can, perhaps, work with as much Facility in Iron as in Copper. Thirdly, The various Articles made of Copper and Brasses independent of Food, must still employ a great Number of Hands. And lastly, Should Ornaments, and other Parts of Furniture in Copper and Brasses be actually introduced, it is highly probable, that the Number of Hands then wanted to manufacture this Metal would be, at least, equal to that which is at present employed. But, on this Head, I beg leave to add a few Reflections not foreign to my Purpose.

What is so unconfined, so boundless as Fashion? That which to-day is called Taste, to-morrow will, perhaps, be insipid. The change of Mode which yesterday appeared ridiculous, to-day is approved and followed. The Table
 2 which

which was the Standard of Politeness in our Fathers' Days, is now the Object of our Ridicule. Thus whether we consider our Habitations, our Apparel, or our Food, we shall find, that Fashion is our principal Guide : and Fashion we see is ever on the change. Now who is there, taking Fashion for their Guide, that once considers the loss to many Individuals attending every Change ? As (to give but one Instance) will evidently appear in the present Mode of substituting Canvas and Paper in the place of Hangings of Damask, Tapestry, and even of Wainscot itself.

Very far from this is my Intention or Desire ; on the contrary, I have already pointed out, at least, some ways and means whereby industrious Hands may be employed as much as now ; and Time, perhaps, may discover more. But if notwithstanding this, any Individuals should yet suffer ; let me urge the just and well known Maxim, “ That a less
“ Good should always give way to a greater.”

The City of *London* was formerly supplied with Water by means of a few Conduits, situated in different Parts of it : and the Persons employed to serve the respective Houses, were a Company called Tankard-bearers. When Sir *Hugh Middleton* formed the Scheme for conveying the New-River Water to *London*, first by a Canal to supply a Head, next from that Head to convey the Water by Pipes thro' every Street, and lastly by the means of Cross-pipes into every House ; it was allowed to be a grand Attempt, and all were sensible of the Advantages arising from it. Yet happy as this Scheme was, and still is, for *London*, it was not without some prejudicial Consequences ; for it affected the Company of Tankard-Bearers,

kard-Bearers, and obliged them to seek their Redress in other Employments. But tho' they ceased to labour in their accustomed way, and even ceased to be a Company, yet they found other industrious means of subsisting. Now even allowing that, in this Case, some Individuals lost the usual means, nay every means of earning a Support; so nobly useful was the New-River Company's Scheme, and big with so much real Benefit, that the private Loss which thence ensued, cannot be supposed at all proportioned to the public Good, which it has produced.

Accept, Sir, these my Reflections on Copper Utensils in preparing what we eat and drink; and on the Effects of Verdigrase on the human Body. The Sentiments are yours as well as mine; and though it has fallen on me to display the Dangers we are thereby subject to; yet is it under your Sanction, that I am embolden'd to offer these my Thoughts to the Public. The Subject is not only serious, but alarming; and, as I have already observed, is worthy the Attention and Enquiry, not only of private Subjects, but even of our public Legislature. The Preservation of Life and Health is an indispensable Duty; and even by the Principle of Self-love, every one is solicitous for his own Welfare: To give but a single Instance among a thousand. How careful is every Gentleman not to drink of Wine he suspects is adulterated? How scrupulous what Merchant he deals with, and what Tavern he uses? Why so, but because bad Wine, he knows, is pestilential in it's Effects on the human Body? If then so much is to be justly feared from adulterated Wines, how much more is there not to be apprehended from the poisonous Corruption of Verdigrase tainting almost every thing we eat

eat and drink ? Surely it must be confessed, that the Thought is alarming !

But here, Sir, you will permit me to draw to a Conclusion, and only wish, and entreat my Readers, before I take my leave of them, that if either the Subject I have treated, or my Manner of treating it, appear to them insufficient to deserve their Attention ; they will at least be assured, that however I may be arraignable for any Error in my Judgment, I am perfectly free from aught of Sinister in my Intention with regard to the present Matter. On the other hand, if Reflection and Enquiry should shew these Sentiments to be just, and my Manner of reasoning to be of weight, may the Public reap the Fruit of this Labour, I have undertaken for their Sake, by reducing to practice the friendly necessary Precautions I here meant to give them through your Means.

I am,

With unfeigned Respect,

S I R,

Your much obliged,

And obedient humble Servant,

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